

***Nemoura gemma*, a New Species of the Nemouridae
(Insecta: Plecoptera) from Korea**

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ABSTRACT

A new species of the genus *Nemoura* is described from Korea. *Nemoura gemma* sp. n. is close to *Nemoura jezoensis* Okamoto and *Nemoura alaica* Zhiltzova, but can be distinguished by the entire shape, dorsal sclerite, and the presence of spines on ventral sclerite of epiproct, and the existence of cercal hooks.

Key words: *Nemoura gemma*, Description, Plecoptera, Korea

INTRODUCTION

Nemouridae, which contains the most species of Plecoptera, includes 15 genera in the world (Baumann, 1975). Among the genera, *Nemoura* (Nemourinae), and *Amphinemura* and *Protonemoura* (Amphinemurinae) are recorded by Yoon (1988) in Korea. The genus *Nemoura* comprises two species, *Nemoura jezoensis* Okamoto (1922) and *Nemoura tau* Zwick (1973) in Korea.

The males of the genus *Nemoura* have distinctive sclerotized cerci with terminal hooks. The females have a large pregenital plate and slightly sclerotized truncate cerci (Baumann, 1975; Shimizu, 1996). In this paper *Nemoura gemma* sp. n. is described.

DESCRIPTION

***Nemoura gemma* sp. n.** 파리민강도래 (Fig. 1)

Materials examined. Holotype: ♂ (CNU), Tugyusan National Park, Chollabuk-do, 28 IV 1998,

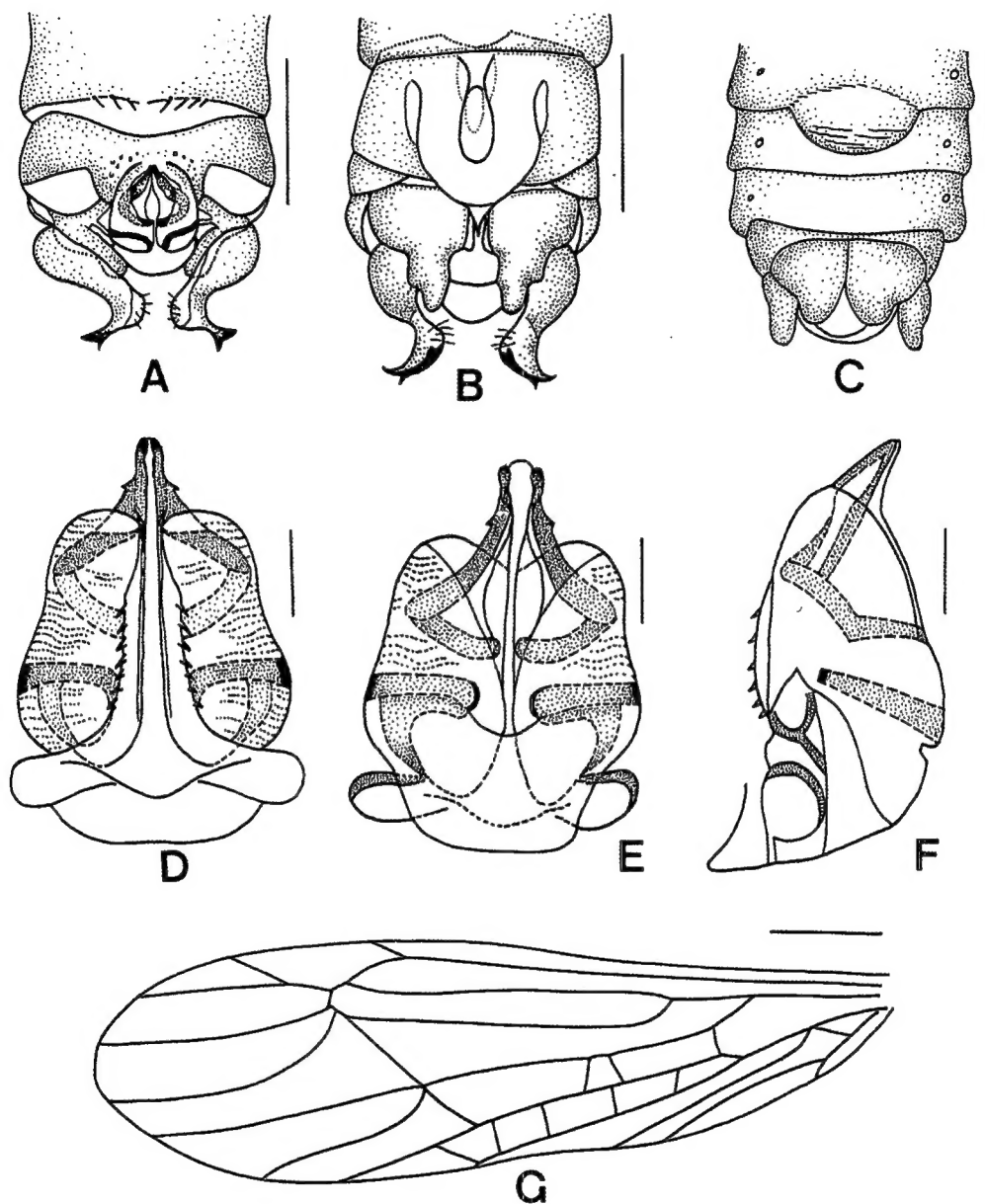


Fig. 1. *Nemoura gemma* sp. n.: A, male terminalia, dorsal; B, male terminalia, ventral; C, female terminalia, ventral; D, epiproct, dorsal; E, epiproct, ventral; F, epiproct, lateral; G, male left forewing (scale bars: A, B, C = 0.5 mm; D, E, F = 0.3 mm; G = 1 mm).

S. A. Ham. Paratypes: 1 ♀ (CNU), same data as holotype; 1 ♂, 1 ♀, Mudungsan Sanjang Valley, 23 IV 1997, S. A. Ham; 1 ♂, Myongjisan, Kyonggi-do, 18 IV 1994, J. S. Kim; 1 ♂, Myongjisan, Chollabuk-do, 28 IV 1991, Y. G. Cho; 6 ♂, 6 ♀, the region between Mujuguchondong and Najetongmun, Chollabuk-do, 28 IV 1991, Y. G. Cho.

Male. Body brown and 4.0–5.0 mm long; forewing 5–6 mm long. Wings almost hyaline, with dark, X-shaped mark; veins brown. Cerci long pineal and curved inward with two hooks at base, mostly sclerotized except inner margins. Sternite IX with a slender vesicle. Hypoproct wide and round with a small sharp-pointed apex; extended weakly to sternite X. Tergite IX strongly sclerotized with several long setae at posterior margin. Tergite X poorly concave below epiproct, with many stout spines over the concave region. Epiproct small pear-shaped in dorsal aspect, base rounded, apex recurved and sclerotized, bilaterally symmetrical; dorsal sclerite large and triangular; ventral sclerite weakly sclerotized, broad at base, with lateral knobs at basolateral corners; forming parallel ridges with a row spines on each side; lateral arms slender and long.

Female. Body brown and 4.5–6.0 mm long; forewing 6–7 mm long. Cerci conic without any hooks. Sternite VII strongly sclerotized and extended distally; covering half of sternite VIII and forming half-moon pregenital plate with transverse gutters.

Larva. Unknown.

Etymology. *Gemma* is a latin, meaning provided with bud, and refers to the shape of dorsal sclerite on epiproct.

Remarks. The species of *Nemoura* can be easily distinguished by epiproct (aedeagus) of males. *Nemoura gemma* sp. n. is close to *Nemoura jozoensis* Okamoto (1922) from Korea and *Nemoura alaica* Zhiltzova (1976) from Russia.

The male of *Nemoura jozoensis* has epiproct which is long columnar and lacking sclerotized apex, and cerci curved inward and recurved outward at the apices without hooks. In *Nemoura alaica* male, the dorsal sclerite of epiproct is small and round, and the ventral sclerite weakly sclerotized without spines. Accordingly, *Nemoura gemma* sp. n. can be separated from the two related species by the entire shape, dorsal sclerite, and the presence of spines on ventral sclerite of epiproct, and the existence of cercal hooks.

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한국산 강도래 목 (민강도래 과)의 1신종, *Nemoura gemma* sp. n.

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요 약

한국산 민강도래 속의 신종인 *Nemoura gemma* sp. n.의 성충을 삽화와 함께 기재한다. 본 종은 *Nemoura jezoensis* Okamoto와 *Nemoura alaica* Zhiltzova와 유사하나, 항상판의 외형 및 배부경판의 형태, 복부 경판의 가시의 유무와 미모에서의 갈고리의 유무 등으로 쉽게 구별된다.